

RAFIX FS switching element universal PCB, silver, for SMT LED, 1 NC, with light guide



fields of application

- > Measurement-control-regulation
- > Electrical engineering
- > Mechanical and system engineering
- > Signalling systems
- > Vehicle construction
- > Agricultural and forestry machinery
- > Construction machinery
- > Handheld terminals
- > Industrial robots



description

These switching elements have external plungers and therefore can only be combined with pushbuttons, selector switches and keylock switches.

The PCB switching elements are positioned on a PCB shared with other components. These can subsequently be mounted behind the front panel together with the actuators and signal indicators. The switching elements "float" directly underneath the actuators on the PCB behind the front panel and leave plenty of space for other components.

In the center channel of the switching element, there are either light conductors for the use of SMT-LEDs, or 3 mm THT LEDs can be installed for illumination.

PCB mounting depths

- 9.2 mm for RAFIX 22 FS+ and RAFIX 22 FSR
- 15.7 mm for RAFIX 30 FS+:

PCB contact block for RAFIX 22 FS+, RAFIX FSR and RAFIX 30 FS

Only suitable for pushbuttons, selector and key switches, not for mushroom pushbutton and emergency stop

Silver contacts (= black housing)

Mounting: Soldering on printed circuit board

Version with light guide for SMT LED, without light guide for THT LED

marking:

- normally closed contacts = red plungers
- normally open contacts = green plungers
- N/C and N/O contacts = yellow plungers

technical data

> general

| | |
|--|--|
| Feature | with light guide |
| Disassembly possible | no |
| Color | black |
| Operating temperature, min. | -40 °C |
| Operating temperature, max. | 85 °C |
| Storage temperature, min. | -40 °C |
| Storage temperature, max. | 85 °C |
| illuminated | Yes |
| Luminous elements | LED |
| Lamp socket | SMT LED |
| Soldering | Manual / wave |
| Solder heat resistance according to standard | DIN EN 60068-2-20 |
| Packaging unit | 30 pcs. |
| net weight | 2.2 g |
| Operating life electrical | 1,000,000 (1A / 250V AC) cycles 100,000 (2A / 250V AC) cycles 30,000 (4A / 250V AC) cycles |
| B10 electrical | 1.300.000 (1A / 250V AC) cycles 130.000 (2A / 250V AC) cycles 40.000 (4A / 250V AC) cycles |
| Environment resistance | IEC 60068-2-14 IEC 60068-2-30 IEC 60068-2-33 IEC 60068-2-78 |
| Shock resistance according to standard IEC 60068-2-27 | 50 g at 11 ms amplitude semi-sinusoidal |
| Vibration-resistance according to standard IEC 60068-2-6 | 5 g at 10 - 500 Hz |
| MOQ order | 30 pcs. |
| RoHS compliant | Yes |
| REACH compliant | Yes |

> mounting diameters

| | |
|---------------------------|---------|
| Outside dimension, length | 17.3 mm |
| Outside dimension, width | 17.3 mm |
| Outside dimension, height | 16.9 mm |
| Mounting depth | 9.2 mm |

> mechanical data

| | |
|----------------------|----------------|
| Contact function | 1 NC |
| Contact system | Bridge contact |
| Contact material | Silver |
| Fixing | Soldering |
| Solderability | Yes |
| Terminal on the rear | THT |

> electrical data

direct links

> [RAFI eCatalog](#)

| | |
|-----------------------------------|--|
| Rated insulation voltage | 250 V |
| Rated surge voltage | 2,500 V |
| Rated voltage, min. | 10 V |
| Rated voltage, max. | 250 V |
| Operating current, min. | 1 mA |
| Rated current, min. | 0.01 A |
| Rated current, max. | 4 A |
| Rated power, min. | 0.5 W |
| Category of use AC-15 / B300 | 120 V / 3 A (IEC 60947) 240 V / 1,5 A (IEC 60947) |
| Categories of use | AC-15 / B300 DC-13 / Q300 |
| Category of use DC-13 / Q300 | 120 V / 0,55 A (IEC 60947) 240 V / 0,27 A (IEC 60947) |
| Conditional short circuit current | 1,000 A |

drawings

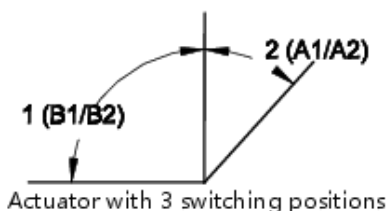
System drawing



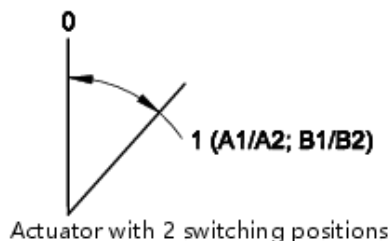
System drawing

| Variant | 1S / 1NO | 1Ö / 1NC | 2S / 2NO | 2Ö / 2NC | 1S + 1Ö / 1NO + 1NC |
|--|---------------------|-------------------|---------------------|-------------------|---------------------|
| Contact A1/A2 Connection designation | 1S / 1NO 13 - 14 | - | 1S / 1NO 13 - 14 | 1Ö / 1NC 11-12 | 1S / 1NO 13 - 14 |
| Contact B1/B2 Connection designation | - | 1Ö / 1NC 21-22 | 1S / 1NO 23-24 | 1Ö / 1NC 21-22 | 1Ö / 1NC 21-22 |
| Contact C1/C2* Connection designation | LED* | LED* | LED* | LED* | LED* |

*LED assignment when actuator is illuminated



Actuator with 3 switching positions



Actuator with 2 switching positions